

small volume of water typically discharged causes no problems with energized electrical gear or computers. The water has demonstrated capability to wash harmful smoke particles, including corrosive PVC gases, from the air. Spaces protected by micromist systems do not have to be evacuated or sealed prior to discharge, as is the case with gaseous agent systems, such as the halons and recently developed halon alternatives. The water poses no life safety hazard, unlike many gaseous agents, and is environmentally safe. Micromist piping and nozzles are very simple in construction which enhances system reliability. The system takes up much less space than a sprinkler system, since pipe sizes, control equipment, water supply, and pumps typically are much smaller.

At this time, micromist systems are not listed by Underwriters Laboratories (UL) or Factory Mutual (FM), and do not conform to any existing standard of the National Fire Protection Association (NFPA). However, NFPA has formed a new water mist standards technical committee, and listings are expected in the future.

The micromist development team is working with a number of cultural heritage agencies, including the NPS, the Library of Congress, the National Gallery of Art, and several Canadian and European institutions, to test the system in late 1993 through mid-1994. The tests will

include exposure of museum, library, and archival materials to fire and water discharge, and subsequent evaluation of those materials for damage by conservators and curators. Limits of extinguishing capability also are expected to be identified during the test program. If damage is shown to be minimal or non-existent, once the system has UL, FM, and NFPA approval, it should be an extremely viable alternative to halon systems. The micromist system also may prove to be a desirable way to protect historic structures in which conventional sprinkler systems can be very difficult or expensive to install.

Upon completion of the University of Maryland tests, the NPS will disseminate the results of the tests through agency safety and cultural resources channels. The micromist system may be recommended for small space applications and to replace existing halon suppression systems which are being phased out because of new Environmental Protection Agency regulations restricting the use of halons and other substances that damage the Earth's ozone layer.

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## It is No Small Thing to Outwit Time<sup>1</sup>

Elizabeth M. Browning

Outwitting time was the underlying theme of the Archeology and Ethnography Collections Care and Maintenance course held in Tucson, AZ, in June of this year. The concept of a training course emphasizing a preventive conservation approach to collections management "grew out of the Pilot Training Program for Collections Care and Maintenance funded by the Bay Foundation and administered by the National Institute for the Conservation of Cultural Property (NIC) in cooperation with the American Association of Museums and the American Association for State and Local History."<sup>2</sup> Preventive conservation is the ongoing activity of non-interventive actions taken to prevent damage to and to minimize deterioration of objects housed in museums, libraries, research centers, and similar institutions. As part of the program, the Arizona State Museum developed a curriculum focused on the management of archeology and ethnography collections. Three other museums simultaneously developed curriculum for training staff who care for fine arts, history, and natural sciences collections. All four curricula, published by the NIC, are available for use by museums in developing training courses for site staff.

The course discussed here was adapted from the original pilot training program and is currently funded by the Cultural Resources Training Initiative of the National Park Service (NPS). Since its first offering by the NPS in 1991, 60 participants have completed the course. The



Constructing custom storage mounts was cited as one of the most beneficial sessions of the course.

two-week (80 hour) course is primarily designed to serve non-Federal museums, Native American cultural centers, historical societies, and other cultural institutions that have limited opportunities or budgets for staff training. The NPS funds travel and lodging costs, while the participant's institution or agency pays for daily meals and incidental expenses. Only five of the twenty available spaces may be filled by qualified applicants from the Department of the Interior. Geographically, this year's class included participants from Alaska to Georgia, Massachusetts to Micronesia. Agencies represented included state museums, historical societies, and preservation agencies, Indian tribal museums and reservations, private museums, the Bureau of Indian Affairs, and the National Park Service. To qualify, applicants must be

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Field trips to local repositories and museums present opportunities to apply new principles.

responsible for the care of museum collections that include a high percentage of archeological and/or ethnographic objects. Individuals who spend much of their work day caring for museum objects but have had minimal training in collections management are strong candidates for selection.

The philosophical and ethical underpinnings of collections management are reiterated throughout the course in sessions on the nature of anthropological collections, principles and ethics, and legal issues. Overall, the course emphasizes the physical preservation and protection of objects. Classroom lectures on the museum environment and storage are supplemented with hands-on practicums, including a four-hour workshop in design and construction of custom storage mounts. Instructors take a practical approach to planning, funding (grant-writing), security, handling of objects, conservation treatment, and exhibit design and production. Frequent classroom exercises give participants an opportunity to apply new material and to benefit from an instructor's assessment of their product. In addition, the teamwork required during some exercises hones skills needed on-site where staff members from various disciplines must forge consensus while dealing with limited time and funds.

The Western Archeological and Conservation Center generously hosts the course, providing classroom space, instructors, and access to a storage space and conservation lab. Staff of the Arizona State Museum and the Central Arizona Project Repository are regular members of the instruction team, as are staff of the University of Arizona. Additional instructors are drawn from all areas of the museum profession including conservators and exhibit designers in private practice, staff from small- to medium-sized museums, the Smithsonian Institution, the National Endowment for the Humanities, and the National Park Service.

Two highlights from this year's course illustrate the caliber of the training experience. Based on recommendations from previous classes, a new session on handling sacred and culturally-sensitive objects was added to the curriculum. This year's session focused on Native American issues regarding such objects. However, as one participant noted, the principle of "treating objects with

proper respect relative to their cultural context" can be applied to objects from all traditions. A second session was facilitated by the Arizona State Museum, where a new exhibit, *Paths of Life*, was under construction. An evening tour gave participants a look at the complex process of planning and producing an exhibit that extensively uses museum objects.

As in preceding years, participants, instructors, and coordinators closed the course with a sense of having experienced something extraordinary. Perhaps the participants gave the best expression of a shared perception in their course evaluations: "I personally feel that the combination of different experiences of the participants contributed a lot to the overall success of the training. Thanks for a memorable, instructive, stimulating experience."



Hands-on practicums are a strong point of the course.

For information on this course, contact the National Park Service, Curatorial Services Division, P.O. Box 37127, Washington, DC 20013-7127. An announcement soliciting applications for the Archeology and Ethnography Collections Care and Maintenance course are widely distributed throughout the museum community each spring. To receive a copy of this announcement, contact the Stephen T. Mather Employee Development Center, National Park Service, P.O. Box 77, Harpers Ferry, WV 25425-0077.

<sup>1</sup> Motto of the National Institute for the Conservation of Cultural Property taken from remarks given by A. Bartlett Giamatti in 1982.

<sup>2</sup> Training for Collections Care and Maintenance: A Suggested Curriculum, National Institute for the Conservation of Cultural Property, 1990.

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